

New records and new species of *Cataegis* (Gastropoda: Seguenzioidea) from Solomon Islands

Claude VILVENS

Rue de Hermalle, 113 - B-4680 Oupeye, Belgium
Scientific Collaborator, Muséum national d'Histoire naturelle, Paris.
vilvens.claude@skynet.be

KEYWORDS. Gastropoda, Seguenzioidea, *Cataegis*, Solomon Islands, new records, new species.

ABSTRACT. New records of one known Cataegidae species described from Indonesia area are listed, extending its distribution to Solomon Islands. Three new species are described from Solomon Islands and compared with similar species: *Cataegis stroggile* n. sp., *C. tallorbioides* n. sp. and *C. pleres* n. sp.

RESUME. De nouveaux relevés d'une espèce connue de Cataegidae décrite d'Indonésie sont listés, étendant ainsi son aire de distribution. Trois nouvelles espèces sont décrites et comparées avec des espèces similaires: *Cataegis stroggile* n. sp., *C. tallorbioides* n. sp. et *C. pleres* n. sp.

INTRODUCTION

Cataegis is a deep-sea genus belonging currently to the Seguenzioidea superfamily. The genus was described by McLean & Quinn (1987), based upon shells collected in deep waters (384-1281 m) off Colombia, with *Cataegis toreuta* McLean & Quinn, 1987 as type species. It appeared later that the type species was a synonym of *Homalopoma finkli* Petuch, 1987 from Venezuela described a few months before (Warén & Bouchet, 1993).

In the new genus describing paper, two other species were described, *Cataegis meroglypta* and *C. celebesensis* (McLean & Quinn, 1987), the former living in north-western Atlantic (from Gulf of Mexico to Colombia - also recorded by MacDonald et al., 1995; Carney, 2001, Sasaki et al., 2010), the latter living in Indo-Pacific, more precisely in the Makassar Strait, Celebes Sea.

One additional new species, *C. leucogranulatus* (Fu & Sun, 2006), was added later to the genus from

Taiwan, initially as a *Hybochelus* and transferred to *Cataegis* by Warén (2011), giving for the genus in 2015 a total amount of only 4 living species (a fossil *Cataegis* was found in Japan: *C. nakagawensis* Kaim, Jenkins & Hikida, 2009)

Although *C. celebesensis* is primitively described from Indonesia, it is not so surprising that French IRD-MNHN expeditions in Solomon Islands (rather far indeed from Celebes Sea) have collected various *Cataegis* specimens, revealing an extension of the single Indo-Pacific known species and also three new species that are described in this paper.

Material and methods

The material studied in this paper was collected by various French IRD-MNHN expeditions covering an area focusing in particular on Solomon Islands and Vanuatu, in addition to Indonesia. The following table lists these expeditions (the material is deposited in MNHN otherwise mentioned):

Campaign	Prospecting area	Date (m/y)
BOA 1	Vanuatu	9/2005
CORINDON	Makassar strait, Celebes sea, Indonesia	11/1980
SALOMON 1	Southern Solomon Islands	9/2001
SALOMON 2	Northern Solomon Islands	10-11/2004
SALOMONBOA 3	Central and southern Solomon Islands	9-10/2007

Table 1. List of the Celebes Sea and Solomon Islands MNHN expeditions mentioned.



Figure 1. Map of approximate locations of MNHN expeditions discussed in this paper :
 ★ : SALOMON 1; ◻ : SALOMON 2; ⊙ : SALOMONBOA 3; * : BOA 1; ● : CORINDON.

Regarding the distribution of the new species and the extension of the distribution of known species, the range is taken from the internal intervals of the two extremes values.

Regarding the description methodology, the main conchological features used are (see Figure 2 below):

- ◆ general shape of the shell: spire depressed or depressed - conical, cyrtocooidal (=convex cone-shaped), coeloconoidal (=concave cone-shaped);
- ◆ size and shape of the protoconch;
- ◆ shape of the whorls: convex, concave, straight - with or without shoulder or keel;
- ◆ spiral cords of the whorls: ontogeny, number, beaded or smooth, distance between cords;
- ◆ axial sculpture of the whorls;
- ◆ shape of the aperture, features of the outer and inner lip;
- ◆ shape of the base and spiral cords: number, beaded or smooth, distance between cords;
- ◆ features of the umbilicus: open or covered with a callus or a columellar expansion, relative size;
- ◆ columella: straight or arcuate, vertical or oblique, thickened or not;

- ◆ colour: background, pattern.

Abbreviations

Repositories

MNHN: Muséum national d'Histoire naturelle, Paris, France

Other abbreviations

H: height
 W: width
 HA: height of the aperture
 TW: number of teleoconch whorls
 P1, P2, P3, ...: primary cords (P1 is the most adapical);
 Pi: all primary cords;
 S1, S2, S3, ...: secondary cords (S1 is the most adapical); Si: all secondary cords;
 T1, T2, T3, ...: tertiary cords (numbered following appearance order); Ti: all tertiary cords;
 stn: station
 lv: live-taken specimens present in sample
 dd: no live-taken specimens present in sample
 sub: subadult specimen
 juv: juvenile specimen

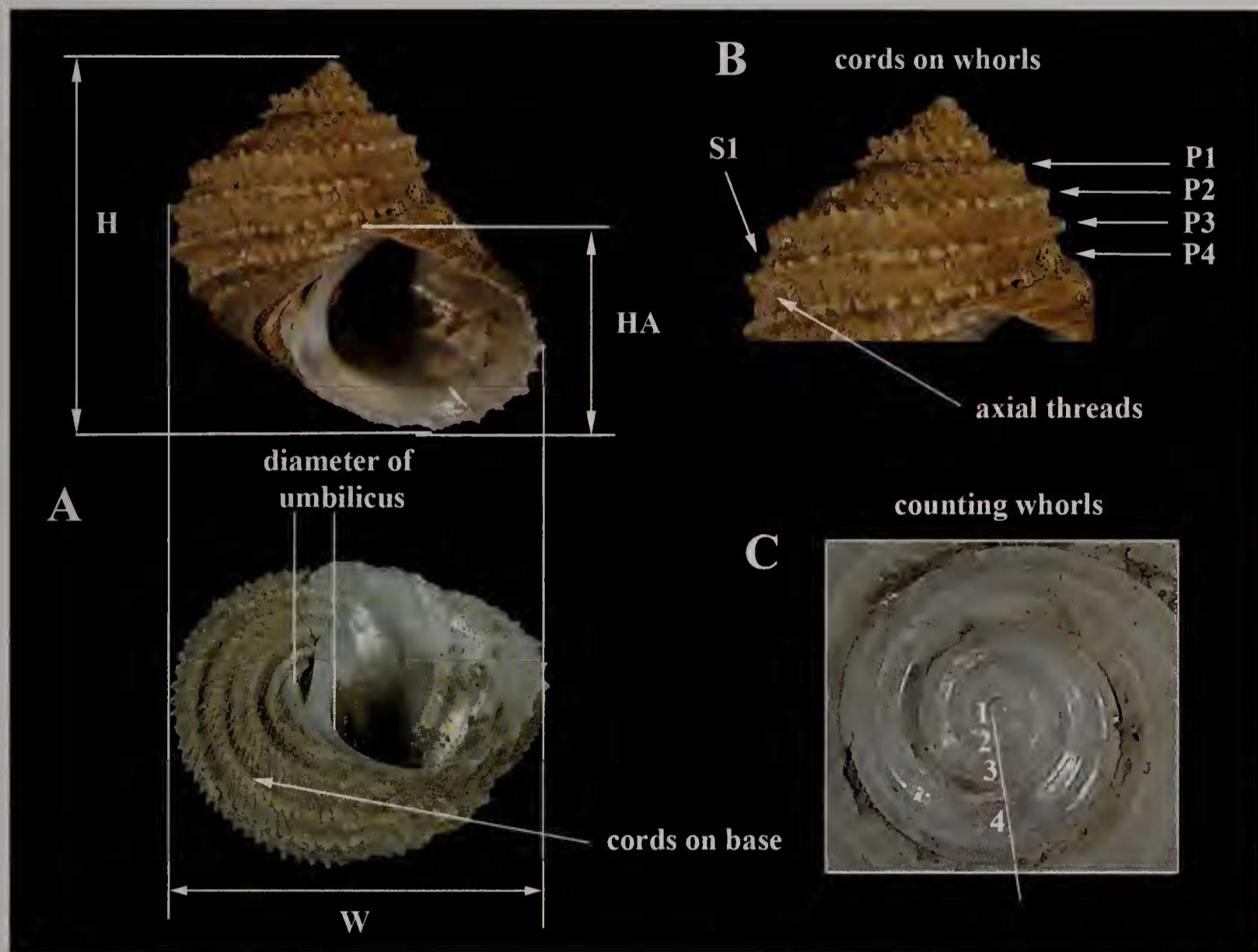


Figure 2. Useful features of *Cataegis* shells. **A.** Shell dimensions: H: height; W: width; HA: height of the aperture (shell: *C. tallorbioides* n. sp., Solomon Islands). **B.** Terminology used for spiral cords (shell: same as A). **C.** Numbering of whorls (shell: *C. stroggile* n. sp., Solomon Islands).

SYSTEMATICS

The systematic position of the genus *Cataegis* has changed a few times: family Cataegidae with uncertain affinity among Trochidae (Hickman & McLean 1990), subfamily of Chilodontidae Wenz, 1938 in Seguenzioidea Verrill, 1884 (Bouchet & Rocroi, 2005) and finally full family in Seguenzioidea after molecular analysis (Kano, 2008; Bouchet, 2015).

Family CATAEGIDAE McLean & Quinn, 1987

Genus *Cataegis* McLean & Quinn, 1987

Type species: *Cataegis toreuta* McLean & Quinn, 1987 (by original designation) [syn. of *Homalopoma finkli* Petuch, 1987] – Recent, Colombia, 933-961 m.

Remarks. The main features for *Cataegis* are a relative great size (H up to 20 mm and even more), rather prominent spiral cords on the whorls and on the base, a transversally elongated aperture, a more or less closed umbilicus and a whitish colour. The particular position of this genus is also justified by its radula, combining an absent rachidian, the two first laterals fused and the large first marginal.

Cataegis celebesensis McLean & Quinn, 1987

Figs 3A–J

Cataegis celebesensis McLean & Quinn, 1987. Type locality: Makassar Strait, Celebes sea, Indonesia, 1080 m.

Material examined. Solomon Islands. SALOMON 1: stn CP1753, 9°03'S, 159°49'E, 1001-1012 m, 1 dd. – SALOMON 2: stn CP2216, 7°45'S, 157°39' E, 930-977 m, 3 dd. – Stn CP2217, 7°49' S, 157°41' E, 1045-1118 m, 2 dd. – Stn CP2252, 7°28' S, 156°18' E, 1059-1109 m, 1 dd. – Stn CP2253, 7°26'S, 156°15'E, 1200-1218 m, 1 dd juv. – Stn CP2269, 7°45'S, 156°56' E, 768-890 m, 1 dd. – SALOMONBOA 3: stn CP2782, 09°01'S, 159°29'E, 1414-1422 m, 3 lv. – Stn CP2783, 08°53'S, 159°23'E, 1501-1545 m, 1 dd.

Vanuatu. MUSORSTOM 8: stn CP1076, 15°54'S, 167°30'E, 1100-1191 m, 1 lv sub, 1 lv juv.

Distribution. Indonesia, Makassar Strait, 1080-1647 m (living); Solomon Islands, 890-1501 m, living at 1414-1422 m; Vanuatu, 1100-1191 m (living).

Remarks. The main characteristics of this species are:

- ◆ height up to 20 mm, width up to 20 mm;
- ◆ shell rather strong with a turbinate shape; rather elevated spire; rounded periphery;
- ◆ teleoconch cyrtoconoidal, of about 4 convex whorls with 4 strong, similar in size, thick, smooth spiral cords, clearly visible starting from 2nd whorl; P1 weaker than other cords; distance between cords much greater than cords; last whorl very large, expanding quickly; weak, fine prosocline threads between cords on first whorls, only growth lines visible on last whorls;
- ◆ aperture elliptic, transversally elongated;
- ◆ columella rounded, without tooth;
- ◆ base convex with 5 spiral cords, distance between cords about 2x size of cords;
- ◆ umbilicus covered by a columellar callus, making umbilicus completely closed or reduced to a narrow chink;
- ◆ white.

The samples from the Solomon Islands match well the original description. The only additional feature is a tertiary cord T1 between suture and P1 on some specimens, P1 being so not strictly subsutural. The Vanuatu samples differ slightly by having a not so transversally elongated aperture, while having the same cords ontogeny.

Cataegis stroggile n. sp.

Figs 3K-Q.

Type material. Holotype (28.1 x 24.1 mm) MNHN (IM-2000-32638). Paratype (21.6 x 19.8 mm) MNHN (IM-2000-32639).

Type locality. Solomon Islands, New Georgia sound, SALOMONBOA 3, stn CP2782, 09°01'S, 159°29'E, 1414-1422 m.

Material examined. Solomon Islands. SALOMONBOA 3: CP2782, 09°01'S, 159°29'E,

1414-1422 m, 1 dd (holotype). – Stn CP2821, 10°19'S, 161°54'E, 686-864 m, 1 dd, 2 dd juv (paratype MNHN).

Distribution. Solomon Islands, 864-1414 m (dead).

Diagnosis. A large *Cataegis* species with a rather elevated, conical spire and a rounded periphery, with 4 smooth, rounded, poorly marked spiral cords on the penultimate whorl, a more or less rounded, only very slightly elongated aperture, 7 thinner spiral cords on the base and an open umbilicus partially covered by a columella expansion.

Description. *Shell* of rather usual size for the genus (height up to 28.1 mm, width up to 24.1 mm), weakly higher than wide, rather thin, conical to slightly cyrtoconoidal; spire moderately elevated, height 1.1x to 1.2x width, about 2.1x aperture height; umbilicus open, partially covered by a columella expansion.

Protoconch about 220 µm (missing on holotype, fully preserved on paratype), of 1 whorl, first half granular, without visible terminal varix.

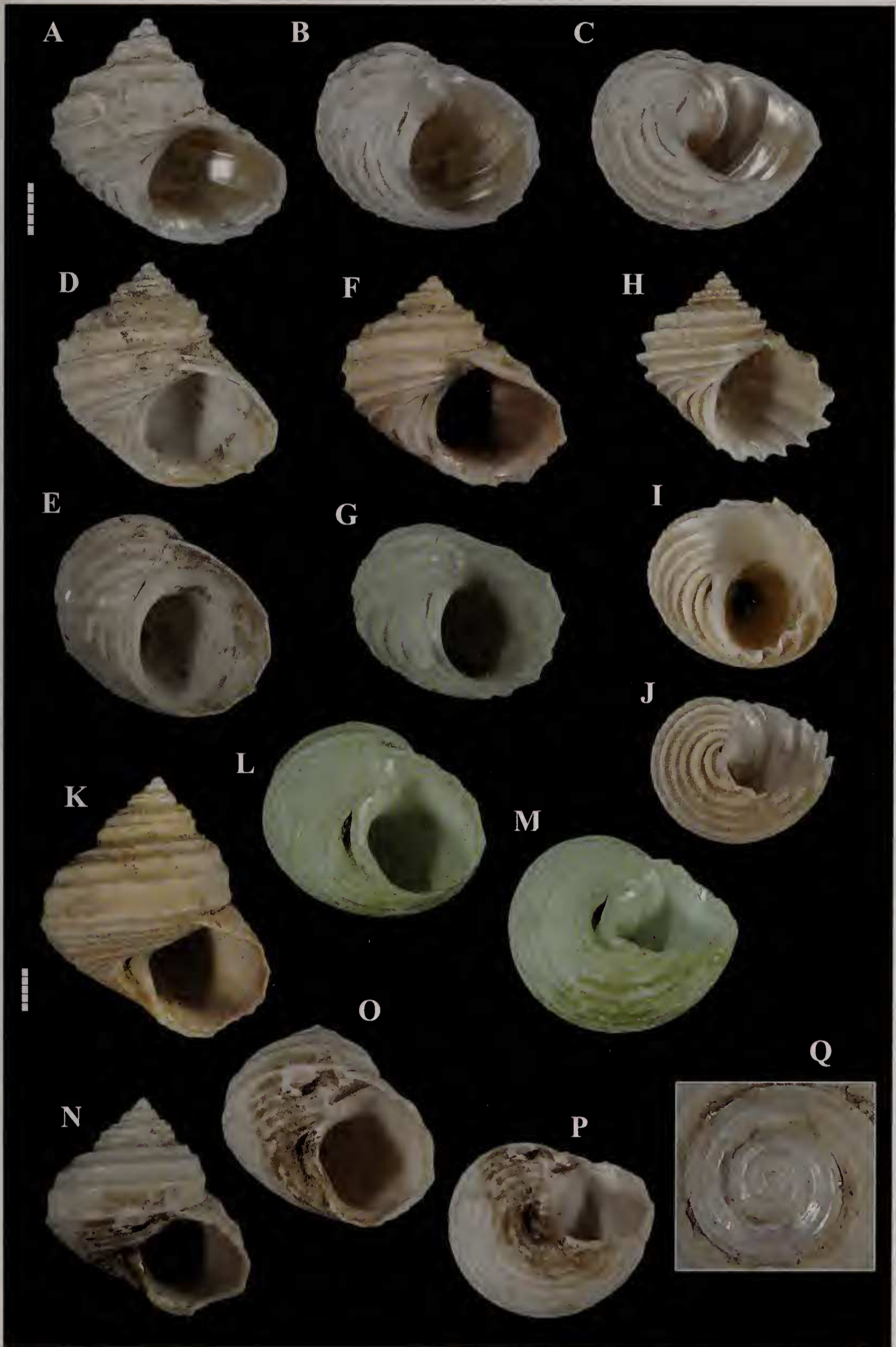
Teleoconch up to 6.1 convex whorls, with 4 smooth, poorly marked spiral cords on penultimate whorl; distance between cords much greater (about 3x to 4x) than width of cords; rounded periphery.

Suture visible, impressed but not clearly canaliculated. First whorl convex, smooth. On second whorl, four Pi resolving, all weak and poorly visible except suprasutural P4 stronger. On third whorl, spiral cords more visible but still very low; distance between cords about 3x size of cords. On fourth whorl, P1 moving abapically, leaving a smooth space between it and suture; cords slightly stronger more prominent; distance between cords about 4x size of cords. On fifth whorl, spiral cords rounding and wider; fine axial growth lines visible. On last whorl, S1 possibly appearing (holotype), thinner than other cords.

Aperture more or less rounded; outer lip rather thin, without denticles.

Figure 3 (scale bars: 5 mm).

A-J. *Cataegis celebesensis* McLean & Quinn, 1987. **A-C.** Holotype MNHN (IM-2000-27162), Makassar Strait, SW of Minahassa Peninsula, Indonesia, CORINDON, stn 231, 1080 m, 19.8 x 20.2 mm. **D-G.** Solomon Islands. **D-E.** South-west of Choiseul Island, New Georgia strait, SALOMON 2, stn CP2216, 930-977 m, 19.7 x 18.6 mm. **F-G.** North-west of Vella Lavella Island, SALOMON 2, stn CP2252, 1059-1109 m, 16.6 x 17.7 mm. **H-J.** Vanuatu, MUSORSTOM 8, stn CP1076, 1100-1191 m, 14.3 x 14.8 mm. **K-Q.** *C. stroggile* n. sp., Solomon Islands, SALOMONBOA 3. **K-M.** Holotype MNHN (IM-2000-32638), New Georgia sound, stn CP2782, 1414-1422 m, 28.1 x 24.1 mm. **N-Q.** Paratype MNHN (IM-2000-32639), North of San Cristobal, stn CP2821, 686-864 m, 21.6 x 19.8 mm.



Columella arcuate, without tooth. Base convex, with 7 smooth spiral cords, distance between cords 1x to 2x size of cords; thin growth lines across whole surface. Base convex, with 7 spiral cords similar in shape to whorls cords, but thinner; distance between cords 1x to 2x size to cords; thin growth lines across whole surface.

Umbilicus rather narrow, funnel shaped, partially covered by columellar expansion.

Colour of teleoconch white with light brown periostracum; protoconch white.

Operculum unknown.

	TW	H	W	HA	H/W	H/HA
holotype	6.1	28.1	24.1	13.3	1.17	2.11
paratype	5.9	21.6	19.8	10.2	1.09	2.12

Table 2. *Cataegis stroggile* n. sp.: Shells measurements in mm for types.

Discussion. The new species reminds *C. celebesensis* McLean & Quinn, 1987 from Indo-Pacific, but this slightly smaller species has much stronger, keel-like (not low rounded) spiral cords, an elongated aperture, 5 spiral cords on the base and an umbilicus closed or reduced to a thin chink.

Etymology. Rounded, curved (Ancient Greek: στρογγυλος, η, ον) – with reference to the very convex shape of the whorls of the shell.

Cataegis tallorbioides n. sp.

Figs 4A-J

Type material. Holotype (15.7 x 15.0 mm) MNHN (IM-2000-32640). Paratypes: 4 MNHN (IM-2000-32641), 1 paratype C.Vilvens.

Type locality. Solomon Islands, off San Jorge Island, SALOMON 2, stn CP2195, 8°26'S, 159°26'E, 543-593 m.

Material examined. Solomon Islands. SALOMON 1: stn CP1755, 8°58'S, 159°42'E, 1288-1313 m, 1 dd, 1 dd sub. – Stn CP1792, 9°15'S, 160°09'E, 477-505 m, 2 lv, 1 lv sub. – Stn CP1805, 9°35'S, 160°43'E, 367-500 m, 1 lv, 1 lv sub. – Stn CP1806, 9°38'S, 160°50'E, 621-708 m, 1 lv sub. – SALOMON 2: stn CP2194, 8°25'S, 159°27'E, 440-521 m, 1 lv. – Stn CP2195, 8°26'S, 159°26'E, 543-593 m, 8 lv (holotype, 4

paratypes MNHN, 1 paratype C.Vilvens). – Stn CP2213, 7°39'S, 157°43'E, 495-650 m, 4 lv. – Stn CP2219, 7°58'S, 157°34'E, 650-836 m, 1 dd. – Stn CP2228, 6°35'S, 156°10'E, 609-625 m, 1 lv sub. – Stn CP2243, 7°43'S, 156°27'E, 518-527 m, 2 lv. – Stn CP2245, 7°43'S, 156°26'E, 582-609 m, 2 lv. – Stn CP2263, 7°55'S, 156°51'E, 485-520 m, 2 lv sub. – Stn CP2264, 7°52'S, 156°51'E, 515-520 m, 2 dd, 1 dd sub. – Stn CP2266, 7°51'S, 156°53'E, 560 m, 1 dd juv. – Stn CP2267, 7°48' S, 156°52' E, 590-600 m, 6 dd. – Stn CP2268, 7°49'S, 156°53'E, 632-640 m, 2 lv. – Stn CP2289, 8°36'S, 157°28'E, 623-627 m, 2 lv. – SALOMONBOA 3: stn CP2777, 09°12'S, 160°55'E, 706-722 m, 1 lv, 1 lv juv. – Stn CP2781, 09°04'S, 159°38'E, 1230-1306 m, 3 lv sub. – Stn CP2837, 10°26'S, 161°22'E, 381-422 m, 1 dd sub, 3 lv juv. – Stn CP2848, 09°35'S, 160°47'E, 414-456 m, 2 lv sub. – Stn CP2849, 09°36'S, 160°46'E, 448-523 m, 4 lv, 2 lv sub, 2 lv juv. – Stn CP2850, 09°37'S, 160°47'E, 502-621 m, 2 dd sub, 3 lv juv.

Vanuatu. BOA 1: stn CP2462, 16°38'S, 167°57'E, 618-641 m, 2 dd sub, 1 dd juv. – Stn CP2465, 16°43'S, 167°59'E, 770-799 m, 1 dd, 2 lv sub. – Stn CP2466, 16°44'S, 167°59'E, 786-800 m, 1 dd.

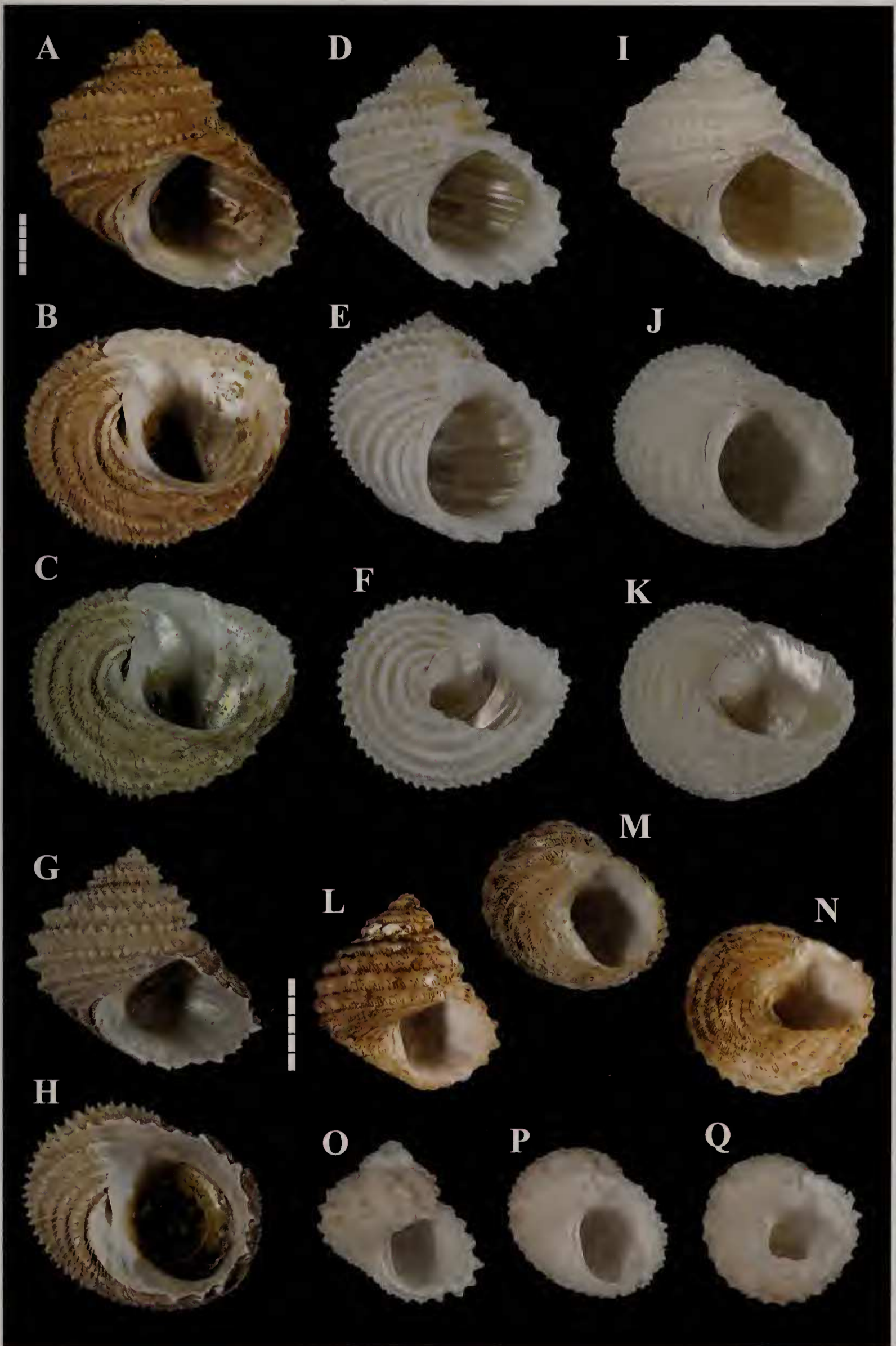
Distribution. Solomon Islands, 422-1288 m, living at 422-1288 m; Vanuatu, 641-786 m, 1 living at 770-799 m.

Figure 4 (scale bars: 5 mm)

A-J. *Cataegis tallorbioides* n. sp., Solomon Islands. **A-C.** Holotype MNHN (IM-2000-32640), SALOMON 2, stn CP2195, 543-593 m, 15.7 x 15.0 mm. **D-F.** Paratype MNHN (IM-2000-32641), SALOMON 2, stn CP2243, 518-527 m, 13.4 x 12.9 mm. **G-H.** Paratype 1, SALOMON 2, stn CP2195, 543-593 m, 12.9 x 13.0 mm.

I-K. *C. leucogranulatus* (Fu & Sun, 2006), South China Sea, 14.9 x 14.4 mm, coll. C.Vilvens.

L-Q. *C. pleres* n. sp., Solomon Islands. **L-N.** Holotype MNHN (IM-2000-32642), SALOMON 2, stn CP2255, 185-196 m, 8.5 x 7.9 mm. **O-Q.** Paratype MNHN (IM-2000-32643), SALOMON 1, stn DW1762, 396-411 m, 5.8 x 5.5 m.



Diagnosis. A medium size *Cataegis* species with an elevated, conical spire and a rounded periphery, with 8 granular to prickly spiral cords on the penultimate whorl, a subelliptical, slightly transversally elongated aperture, a convex base with 5 spiral cords, an umbilicus partially to almost completely covered by a columellar expansion.

Description. *Shell* of medium size for the genus (height up to 16.1 mm, width up to 15.3 mm), weakly higher than wide, rather thin, conical to slightly cyrtocoidal; spire elevated, height 1x to 1.1x width, 1.5x to 1.8x aperture height; narrow umbilicus.

Protoconch about 250 µm (damaged on all types except paratype 5), of 1 whorl, translucent, without visible terminal varix.

Teleoconch up to 4.6 convex whorls, 8 spiral granular cords on penultimate whorl; distance between cords greater than width of cords; rounded periphery.

Suture visible, impressed.

First whorl convex, sculptured by about 20 strong, rather thin, smooth, slightly prosocline threads; interspace between them greater than threads; P2, P3 and P4 appearing at second part of whorl, granular; beads of cords produced by intersection between cords and threads. On second whorl, Pi quickly much stronger, P2 a bit weaker than the two other cords;

beads of cords becoming pointed nodules; axial threads stronger, more prosocline. On third whorl, beads very pointed and elevated, giving a prickly shape to the whorl. On 4th whorl, P1 appearing at begin of the whorl between suture and P2, quickly almost as strong as P2; S1 appearing a bit later, S2 and S3 resolving next; S4 emerging from suture, peripheral, as strong as P3; beads of cords scaly, less elevated. On last whorl, Ti appearing between all the existing Pi and Si; axial threads much closer and beads smaller.

Aperture more or less elliptical with an upper angle, slightly transversally elongated, without denticles, slightly flaring in its lower part; outer lip rather thin, crenulated by edge of the spiral cords.

Columella arcuate, without tooth.

Base convex, with 5 granular spiral cords, similar to cords of the body whorl; distance between cords greater than size of cords; thin axial threads between cords, distance between them similar to threads.

Umbilicus rather narrow, funnel shaped, partially to almost completely covered by a columellar expansion.

Colour of teleoconch white with light brown periostracum; protoconch white.

Operculum multispiral, with a rather short growing edge, light brown.

	TW	H	W	HA	H/W	H/HA
holotype	4.5	15.7	15	10.2	1.05	1.54
paratype 1	4.4	12.9	13	8.8	0.99	1.47
paratype 2	4.5	14.3	14.2	8.1	1.01	1.77
paratype 3	4.4	16.1	15.3	9.4	1.05	1.71
paratype 4	4.6	13.9	13.2	7.9	1.05	1.76
paratype 5	4.3	14.7	14.1	9.2	1.04	1.60

Table 3. *Cataegis tallorbioides* n. sp.: Shells measurements in mm for types.

Discussion. The new species reminds *T. roseola* G. Nevill & H. Nevill, 1869 from western Indo-Pacific, but this smaller species has weaker, more rounded main spiral cords with reddish spots, an aperture that is not elongated and a closed umbilicus.

Cataegis tallorbioides n. sp. is rather close to *C. leucogranulatus* (Fu & Sun, 2006) from South China Sea (figs 4I-K), but this similar in size species has a less elevated spire, beads of spiral cords rounded, not pointed or scaly, and a more transversally elongated aperture.

The description of the new species sounds a bit similar to the one of *Hybochelus mysticus* (Pilsbry, 1890) from south-western Pacific, but this much smaller species has more numerous spiral cords on last whorl and on the base, especially 8 alternating in size spiral cords on the base, with a stronger innermost one bordering the closed umbilicus.

Because the similarities with *C. leucogranulatus* (Fu & Sun, 2006), the new species is placed into the Cataeginidae but the spiral and radial sculpture of the shell could maybe lead to put it into the Chilodontidae family.

Etymology. Shaped (Ancient Greek: -ωδης suffix) – with reference to shape of the shell, that has some affinity with the *Tallorbis* shells.

Cataegis pleres n. sp.

Figs 4L-Q

Type material. Holotype (8.5 x 7.9mm) MNHN (IM-2000-32642). Paratype: 1 MNHN (IM-2000-32643).

Type locality. Solomon Islands, off Kolombangara Island, SALOMON 2, stn CP2255, 8°08'S, 157°02'E, 185-196 m.

Material examined. Solomon Islands. SALOMON 1: stn DW1762, 8°40'S, 160°04'E, 396-411 m, 1 dd (paratype MNHN). – Stn SALOMON 2: stn CP2255, 8°08'S, 157°02'E, 185-196 m, 1 dd (holotype).

Distribution. Solomon Islands, 196-396 m (dead).

Diagnosis. A small *Cataegis* species with a moderately elevated, conical spire and a rounded periphery, with 8 granular to prickly spiral cords on the penultimate whorl, a subelliptical, slightly transversally elongated aperture, a convex base with 5 spiral cords, an umbilicus partially to almost completely covered by a columellar expansion.

Description. *Shell* of small size for the genus (height up to 8.5 mm, width up to 7.9 mm), weakly higher than wide, rather thin, conical to slightly cyrtocoidal; spire moderately elevated, height 1.1x width, 1.8 to 2.2x aperture height; anomphalous.

Protoconch about 200 µm, of 1 whorl, translucent, with a thin terminal varix.

Teleoconch up to 4 convex whorls, bearing 4 strong spiral granular cords and a fifth one partially covered by suture on penultimate whorl; distance between cords greater than width of cords; slightly subangular periphery.

Suture visible, impressed.

First whorl convex, sculptured by about 40 thin, smooth, slightly prosocline, close threads; interspace between them smaller than the size of threads; P1, P2, P3 and P4 appearing at second part of whorl, granular; beads of cords produced by intersection between cords and threads. On second whorl, axial threads more spaced; P3 and P4 slightly stronger than P1 and P2. On third whorl, beads of cords stronger, horizontally elongated and connected to each other, making them difficult to distinguish; S4 emerging partially from suture. On last whorl, new big, horizontally elongated beads resolving; axial threads closer, a bit scaly, corresponding no more to the beads; S4 fully visible, similar in size to P1 and P2, P3 and P4 still a bit stronger than other cords.

Aperture elliptical, vertically elongated, without denticles; outer lip rather thin, weakly crenulated by edge of the spiral cords.

Columella arcuate, without tooth, axially excavated.

Base moderately convex, with 6 or 7 granular spiral cords, thinner than cords of the body whorl; distance between cords similar in size to the size of cords; thin axial threads between cords, distance between them similar to cords.

Umbilicus completely filled by columellar callus.

Colour of teleoconch white with light brown periostracum; protoconch white.

Operculum unknown.

	TW	H	W	HA	H/W	H/HA
holotype	4.0	8.5	7.9	3.9	1.1	2.2
paratype	3.8	5.8	5.5	3.2	1.1	1.8

Table 4. *Cataegis pleres* n. sp.: Shells measurements in mm for types.

Discussion. The new species is rather close to *Cataegis tallorbioides* n. sp. from Solomon Islands (figs 4A-J), but this smaller species has a P1 spiral cord appearing much later than the other Pi (not simultaneously with them), beads of the spiral cords first pointed and then scaly (not rounded and weakly horizontally elongated), 3 spiral cords S1, S2 and S3, at most 5 spiral cords and a partially or almost completely closed (but not filled by a columellar callus) umbilicus.

Cataegis pleres n. sp. is also rather similar to *Tallorbis roseola* G. Nevill & H. Nevill, 1869 from western Indo-Pacific, but this similar in size species has an opposite height/width ratio (wider than higher), different axial sculpture between the spiral cords and less numerous spiral cords on the base.

The new species may also be compared to *Vaceuchelus ampullus* (Tate, 1893) from Australia, but this slightly greater species is wider than higher, 4 (not 5) thicker spiral cords on the last whorl, a rounded aperture and only 4 spiral cords on the base.

Etymology. Complete (Ancient Greek: πλήρης, ες) – with reference to the full set of the four primary cords immediately present on the first whorl.

ACKNOWLEDGEMENTS

I would like to thank P. Bouchet (Muséum national d'Histoire naturelle, Paris) for constructive advice and access to the malacological resources of the MNHN, and V. Héros (MNHN) for her help in finding various information and scientific papers and for registration numbers and locality data. I also thank P. Maestrati (MNHN) for sorting samples and help.

REFERENCES

- Bouchet, P. 2015. *Cataegis* McLean & Quinn, 1987. *In*: MolluscaBase (2015). Accessed through: World Register of Marine Species at

- <http://www.marinespecies.org/aphia.php?p=taxdetails&id=415170> on 2016-09-09
- Bouchet, P. & Rocroi, J.P. 2005. Classification and nomenclator of gastropod families. *Malacologia* 47(1-2): 1-397.
- Carney, R.S. 2001. *Management Applicability of Contemporary Deep-Sea Ecology and Reevaluation of Gulf of Mexico Studies*. Final Report. OCS Study MMS 2001-095 . U.S. Dept. of the Interior Minerals Management Service, Gulf of Mexico OCS Region Office, New Orleans, La. 174 pp.
- Fu, I-F. & Sun, C-L. 2006. A new bathyal trochid from South China Sea. *Bulletin of Malacology* 30: 17-20.
- Hickman, C.S. & Mc Lean, J.H. 1990. Systematic revision and suprageneric classification of trochacean gastropods. *Natural History Museum of Los Angeles County Science Series VI*+169 pp.
- Kaim, A., Jenkins, R. & Hikida, Y. 2009. Gastropods from Late Cretaceous Omagari and Yasukawa Hydrocarbon Seep Deposits in the Nakagawa Area, Hokkaido, Japan. *Acta Palaeontologica Polonica* 54(3): 463-490.
- Kano, Y. 2008. Vetigastropod phylogeny and a new concept of Seguenzioidea: Independent evolution of copulatory organs in the deep-sea habitats. *Zoologica Scripta* 37: 1-21.
- McClellan, J.H. & Quinn, J.F. 1987. *Cataegis*, a new genus of three new species from the continental slope (Trochidae: Cataeginae new subfamily). *Nautilus* 101: 111-116.
- MacDonald, I .R., Schroeder, W.W. & Brooks, J.M. 1995. *Chemosynthetic Ecosystems Studies Final Report*. Prepared by Geochemical and Environmental Research Group . U.S . Dept. of the Interior, Minerals Mgmt. Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 95-0023. 338 pp.
- Petuch, E.J. 1987. *New Caribbean molluscan faunas*. Coastal Education & Research Foundation (CERF). Charlottesville, Virginia. 154 pp.
- Sasaki, T., Warén, A., Kano, Y., Okutani, T. & Fujikura, K. 2010. *Gastropods from Recent Hot Vents and Cold Seeps: Systematics, Diversity and Life Strategies*. In: S. Kiel (ed.), *The Vent and Seep Biota*, Topics in Geobiology 33, Springer Ed.: 169-254.
- Warén, A. 2011. *Molluscs on biogenic substrates*. pp 438-448 in: Bouchet, P., Le Guyader, H. & Pascal, O. Eds. *The natural history of Santo*. MNHN, Paris; IRD, Marseille, PNI, Paris, 572 pp.
- Warén A. & Bouchet, P. 1993. New records, species, genera, and a new family of gastropods from hydrothermal vents and hydrocarbon seeps. *Zoologica Scripta* 22: 1-90.